THE VETERINARY RECORD

A Weekly Journal for the Profession.

No. 492. DECEMBER 11, 1897. Vol. X.

The Eligibility of Lady Graduates.

It will be remembered that a lady who had passed the necessary matriculation test and attended the required terms at the New Veterinary College, Edinburgh, was refused admission to the professional examinations by the Royal College of Veterinary Surgeons. The Council, in declining to admit the lady, acted with courtesy and common sense. The position assumed was that the Charters and Act of Parliament, which defined and limited its duties, never intended that women should be examined, and that to take upon itself the onus of interpreting its powers in opposition to the usage of fifty years was unwarranted. The Council said in effect "if ladies have a right to be examined we are willing to admit them, but the right must be established in a court of law."

The Principal of the College in which the lady-student had attended all her classes for the "A" examination determined, with his usual chivalrous gallantry, to test the question, and if possible demonstrate the lady's right to be examined. Directed by his legal advisers, the first step taken by Principal Williams and his son Professor W. O. Williams was to impound some monies of the R.C.V.S. which happened to be in the hands of the Scotch secretary of the Examining Board. The next step was the presentation of the legal arguments on both sides. One of the defenders' arguments was that the Court in Edinburgh had no jurisdiction.

The object of the pursuers was to obtain a declaration that the defenders "were bound to admit to examinations held by them all students of the New Veterinary College, whether male or female, who comply with the regulations relative to those examinations." The object of the defenders was to know whether they were "bound to admit etc."

The Lord Ordinary has disposed of the action, and we reprint from *The Scotsman* a full report of the judgment. The important question to which both sides desired an answer is left where it was, and the decision is given on the legal plea of jurisdiction. Lord Kincairney said he "sustained the plea of no jurisdiction, with some little regret, because when the action had been brought it might have been decided here as well as in London. . . . . As he had, in his opinion, no jurisdiction, it would not be fitting that he should express any opinion about the pursuers' title, still less about the interesting question on its merits."

This may not be the end of the case, as the pursuers have a right to appeal. So far it is satisfactory, in that the R.C.V.S. has won the action, but the real question still remains and may crop up again. The legal advisers of the Council deserve all the credit which belongs to a successful action, but we should much rather have had a decision which would have settled whether lady students have a right to enter the veterinary profession.

There is one curious statement in the judgment, viz., "that he reached that conclusion from a study of the Charters, the statute, and the rules and regulations, and not from the defenders' record, which told little or nothing." This is rather a reflection upon the conduct of the case by the counsel and solicitors engaged by the R.C.V.S. We have reason to know that his lordship's memory must have played him false, as all the requisite statements of fact were referred to in the pleadings or in the Act, Charters, and bye-laws which were incorporated in them. A copy of the Register was lodged with them. Counsel even offered to call verbal evidence in support of them, but this his lordship said he did not think necessary.

It would be unfair to the professional gentlemen engaged on both sides to allow this point to go unchallenged. The profession should know, what is acknowledged by every member of our Council, that the College solicitor, Mr. Thatcher, has left no stone unturned and evaded no work or trouble so that the interests of the Corporate Body should have their fullest representation.

The Buisson Treatment.

So long as medicine is an empirical art it is right that any treatment which can produce evidence of its value should be tried. "Evidence of value" is a phrase capable of very varied interpretation. The Pasteur treatment of hydrophobia is supported by evidence of value. Every step of it has been proved by experimental repetition under the eyes of hundreds of person. All the facts have been carefully registered and are open to examination.

The Buisson treatment is said to consist of vapour baths, and its origin depends upon the uncorroborated statements of an obscure medical practitioner in Paris. This person related that he was bitten by a rabid dog, but there is no other evidence that the dog was rabid, or even that he was bitten. He stated further that after a period of incubation hydrophobia affected him, and that he determined to commit suicide rather than face the incurable malady. He narrates that the method he chose to terminate his existence was a vapour bath, and that to his surprise its effect was to cure instead of to kill.

This uncorroborated tale by a confessed would-be suicide finds believers, and they are the individuals who disbelieve in Pasteur. When the sailor told his mother that he had seen flying fishes he was reproved for want of truthfulness. When he related how a pair of chariot wheels were raised from the bottom of the Red Sea by the anchor of his ship, the old lady believed "because that was in the Bible."

CASES AND ARTICLES.

REMARKS ON THE DIAGNOSIS OF CARDIAC AFFECTIONS IN THE HORSE.

By E. Wallis Hoare, F.R.C.V.S.

Cardiac affections in the horse have not been studied so carefully or minutely as other diseases. Perhaps one of the reasons for this may be that in organic cardiac affections it is not expedient to recommend treatment, as the subjects of such diseases are of little or no value to their owners.

In some text-books we find symptoms recorded which would appear to enable us to distinguish one form of organic cardiac disease from another. Clinical experience, however, teaches us that this is seldom possible, as no matter how we may pride ourselves on our skill in diagnosis, the results of autopsies demonstrate the frequency of errors. In human practice diagnosis in this respect has attained a high degree of perfection, but in the case of the horse, anatomical peculiarities prevent the use of the stethoscope to anything like the same extent.

But we have a more important matter to consider than the mere distinguishing of one form of organic cardiac disease from another. We have to determine whether we are dealing with an organic affection at all, or a functional disorder. No doubt in a well-marked case there is little difficulty in arriving at a conclusion, at least of the presence of an organic lesion of some kind, but it is the diagnosis in the early stages that requires care and discrimination.

The alterations in the character of the pulse and of the cardiac sounds that occur in many cases of functional disorders are often surprising, and more than once we have had the unpleasant experience of giving a diagnosis of the existence of organic cardiac disease, the result being that the animals were sold and recovered perfectly in their new owner's hands. Irregularity, intermittence, and even the presence of a jugular pulse, with exhaustion after ordinary exertion, would not be symptoms sufficient to base a diagnosis of organic disease, and in the absence of distinct "murmurs" and of signs of interference with the general circulation we should be extremely careful in arriving at a conclusion.

A very frequent cause of functional disorders of the heart is chronic indigestion, which may bring about this condition in a reflex manner by irritation of the gastric nerves, by distension of the stomach, or from malnutrition of the general system. Another fruitful cause is the presence of parasites in the gastro-intestinal canal, which may give rise to the most severe forms of functional cardiac disorder. As a sequel to debilitating diseases such as influenza, functional cardiac disorders are frequently met with, probably depending on an anæmic condition of the blood, as well as on a debilitated state of the nervous system.

One form of organic disease, viz., fatty degeneration, is almost impossible to diagnose, and that such a condition is more common than is generally believed, we have ample evidence on the performance of autopsies.

To the therapeutist the subject of organic cardiac affections does not possess many features of interest, because he gets little credit for prolonging the life of the subjects of diseases of this nature; in human practice the case is altogether different. But functional cardiac disorders are of the greatest possible importance to him, as by rational treatment he can either bring the case to a successful termination or render the animal useful to his owner.

The first matter to decide in such cases is the *cause*, and this being determined the indications for treatment will be easily apparent. If depending on chronic indigestion we get the best results from a combination of nux vomica, sodii bicarb. and gentian, while in many instances the addition of moderate doses of ferri sulph. proves of marked benefit, careful attention to dieting not being overlooked. If parasites be the cause, they must be acted on without delay, and anthelmintic remedies should be the first agents administered. When the functional disorder occurs as a sequel to influenza, the preparations of iron along with the nux vomica and sodii bicarb. give excellent results, but in some obstinate cases we find it necessary to employ digitalis in moderate doses.

Some of these cases require a long period of time to recover, and tax the patience of both practitioner and client. Pericarditis is present in a large proportion of some types of influenza, and gives rise to serious symptoms of cardiac disorder, during the acute stage as well as in convalescence. During the latter period in such cases the administration of potassium iodide is indicated, and clinical experience justifies us in asserting its value.

PROPOSED AFFILIATION OF VETERINARY SOCIETIES WITH THE NATIONAL VETERINARY MEDICAL ASSOCIATION.

By Henry Thompson, M.R.C.V.S.

It was my intention to be present at the meeting of the delegates from the various societies at Leeds, but unfortunately I was unable to get away. Having had some correspondence with Professor Macqueen on the subject, I had formulated some ideas with regard to the scheme. From the report of the proceedings as published in *The Record*, I think all the proposals with the exception of the 2s. 6d. fee seem feasible. My idea of the scheme is as follows:

(*a*) All members of the National Association who are not members of any local society to pay an annual fee of 10s. each.

(*b*) All local societies that affiliate themselves with the National should raise their subscriptions to 10s. each member; 5s. of which to be retained for the working expenses of the local society, the remaining 5s. to be sent to the funds of the National Association, thus making each subscriber a member of the local as well as the National. Any one being a member of more than one society would not, I think,

object to the 5s. being sent to the National in fact it would be to his interest.

(*c*) After all the working expenses of the National have been paid up the balance be allowed to accumulate and be invested.

(*d*) At the end of every five years all the local affiliated societies that may have a balance in hand, send one half to the accumulated funds of the National Association, thus making one common fund.

(*e*) When the accumulated funds of the National have reached a certain extent the interest and a portion of the funds, if necessary, be utilized as follows:

1st. The granting of scholarships to sons of members of the National Association or of the veterinary profession.

2nd. To defend any of the members of the Association in the event of a threatened litigation, the nature of such litigation to be investigated by a committee appointed by the members.

3rd. To provide a benevolent or provident fund for unfortunate members of the profession, or their wives, widows and children.

In time I have no doubt that the funds would reach to such an extent that all the objects named above would be met, and then the members of the Manchester Defence and Benefit Society might see their way to amalgamate and make one large Association.

There is one drawback which could easily be remedied by the members themselves. I refer to the tardiness with which some of the subscriptions are paid. This, I am sorry to say, is a fault in nearly all the societies, and as the offices of secretary and treasurer are purely honorary, all the members should help on the work by remitting their subscriptions at the proper time.

As ten shillings per annum is only about 2¼d. per week, I think *all* members of the profession should join, the subscription being merely nominal, yet in time the funds would accumulate and reach a magnificent sum from which many benefits could be derived.

EXTRACTS FROM FOREIGN JOURNALS.

Eczema Rubrum in the Dog.—By Eppinger, District Veterinary Surgeon.

Chronic eczemas in the dog are often very hard to cure, and eczema rubrum especially tries the patience of the veterinary surgeon. In such cases the author has obtained unexpected and gratifying results by a complete change of food.

A dog fed almost exclusively on vegetables received only meat., and by this treatment the eczema rubrum disappeared completely in 14 days, and did not again return.

Eppinger turned this experience to account, and adopted change of diet in later cases. A young St. Bernard that had never received meat—as a supposed prophylactic against distemper—was affected with eczema. After a regulated quantity of flesh diet the eczema showed itself again a little, but afterwards completely disappeared.

A six-year-old dachshund suffered periodically for several years from this disease. The dog was completely cured after he had received meat diet for 14 days, and for six months he had remained unaffected. Eppinger thinks that these three cases show that a change of food is a most important item in the treatment of eczema rubrum.—*Thierärztlich Centralbl.*

Enterotomy in a Dog.—From the clinique of Prof. Vennerholm, of Stockholm.

A part-bred Newfoundland had suffered from stoppage for some months which had hitherto been unsuccessfully treated. The dog was in a very reduced condition. The abdomen was distended, and through its wall to one side of the prepuce one could feel a hard slightly movable swelling as large as one's fist, which the author resolved to remove by operating.

The dog was therefore narcotised with morphia, the abdomen shaved, the skin disinfected, and the whole field of operation sponged with alcoholic sublimate solution (1·200). During the operation water, sterilized by boiling, was used for swabbing, and at the end a weak sublimate solution (1·5000) and half per cent. lysol solution. The instruments were sterilized in 2 per cent. desinfectol solution.

The dog was put on his back and the rump and thighs covered with cloths which had been dipped in 1 per cent. sublimate solution, and only sufficient space left uncovered for the making of the incision. Laparotomy on the linea alba in front of the prepuce was now commenced. The foreign body was not, however, reached through an opening 10 c.m. long. The wound was therefore reclosed. A longer incision than the first was now made further back in front of the symphysis and running obliquely antero-externally.

The posterior epigastric artery and vein were then ligatured and cut through, now the tumour lying in the rectum was pressed through the wound in the abdominal wall. After making an incision 7 to 8 c.m. through the wall of the bowel a fæcal ball, as hard as a stone and as large as one's fist, was removed. After rinsing the intestinal cavity clean, the wound was closed with thick catgut sutures by Lembert's method. A portion of omentum which had escaped through the abdominal wall was tied in three sections and extirpated. The bowel was thoroughly rinsed, returned into the cavity, and the abdominal wall sutured. The dog received a camphor injection, and was given some cognac and milk the next morning, when the temperature was 39°. In a few day the temperature went down to 37°, and on the 4th day the dog took a little meat and milk. Firm motions were passed. In 18 days the dog was discharged cured. The author attributes the good results of the operation to aseptic method adopted.—*Deutsche Zeitschrift fur Thier.*

G. M.

VETERINARY SOCIETIES.

PROVISIONAL COMMITTEE OF THE N.V.A.

At the last meeting of the Council of the National Veterinary Association the Provisional Committee was elected. Their duties are to make the arrangements for next year's meeting at Scarborough.

The business of an early meeting of the Committee will be to secure papers for the annual meeting. The members are

Chairman : J. Cooke, Esq., Scarborough.

Messrs. Scriven	Messrs. Dobie
Bowman	A. W. Briggs
Faulkner	H. Hunter
Abson	J. Bell
Snarry	W. Norwood
Wartnaby	W. Barker
W. Woods	J. Atcheley
Elphick	A. Taylor
Clarkson	Freeman
McKinna	J. S. Carter
J. H. Carter	A. Lawson
Awde	S. Locke
Wharam	H. Thompson
Dudgeon	J. Armstrong
G. Hardie.	

And Local Secretary, Mr. Frank Somers.

WEST OF SCOTLAND VETERINARY MEDICAL ASSOCIATION.

A meeting was held on October 27th in the Religious Institution Rooms, 200 Buchanan Street, Glasgow, Dr. J. McI. McCall, president, in the chair. The following members were present : Messrs. McNicol, A. P. Blue, J. Renfrew, J. Weir, W. Anderson, J. H. Wilson, G. C. Hill, J. B. Macqueen, D. Imrie, J. Brown and Bishop, Glasgow ; A. McFarlane and J. McNeil, Greenock ; W. Kerr, Dalry, J. D. Miller, Tollcross ; D. Hamilton, Hamilton ; Jno. Taylor, Cathkin ; W. Brownlie, Coatbridge ; D. Allan, Clarkston ; R. Miller, Strathaven ; W Peddie, Cathcart ; Wyse, East Kilbride ; besides the President and Secretary. Visitors : Messrs. T. M. Inglis, Forfar ; Harvey, Weir, Timery, Souter, and Marshall, students.

The PRESIDENT intimated that the Secretary had received letters from Profs. Dewar and W. O. Williams, Edinburgh ; and telegrams from Messrs. Green, Irvine, and Campbell, Kirkcudbright, regretting their inability to attend.

The minutes of the previous meeting were then read and approved

NOMINATIONS.

The following gentlemen were proposed as new members of the Association :

Mr. A. M. TROTTER, M.R.C.V.S., Sanitary Department, Glasgow ; proposed by Mr. Anderson, seconded by Dr. McCall.

Mr. W. ROY, M.R.C.V.S., Parkhead, Glasgow ; proposed by Dr. McCall, seconded by Mr. Begg.

ON "SIDEBONES" WITH SPECIAL REFERENCE TO TREATMENT.

By J. D. MILLER, M.R.C.V.S., Tollcross.

The word sidebone, liks many other veterinary names in common use, cannot be found in a dictionary, nor does it indicate the pathological nature of the disease which is designated. The best that can be said of it is that it conveys a certain meaning to the horseman's mind

Sidebones are defined as "a calcification or ossification of a portion or the whole of the lateral cartilage," which is a definition of their simple uncomplicated form. The nature of this transformation has several forms—complete when extending from the alæ of the pedal bone throughout the entire tissue of the cartilages, and incomplete when the deposition takes place either from the alæ of pedal bone in a direction upwards, and either backwards or forwards, or as not uncommonly, near the centre, or in some instances in close proximity to the upper margin of the cartilage.

The lateral cartilages are essentially cartilages of prolongation, and constitute along with the plantar cushion the complimentary fibro-castilaginous apparatus of the os pedis.

"Each of these cartilages represents a plate flattened on both sides, having the form of an oblique-angled parallelogram, and prolonged behind the third phalanx. The *external face* is convex, and pierced with openings for the passage of veins ; it slightly overhangs that of the pedal bone. The *internal face* is concave, channelled by vascular furrows, and covers, in front, the pedal articulation, and the synovial *cul-de-sac* which projects between the two lateral ligaments of that joint. Below and behind, it is united to the plantar cushion, either through continuity of tissue, as at the inferior border, or by fibrous bands passing from one to the other. The *upper border*, sometimes convex, sometimes rectilinear is thin and bevelled like a shell ; it is separated from the posterior margin by an obtuse angle, in front of which this border is often broken by a deep notch that gives passage to the vessels and nerves of the digital portion. The *inferior border* is attached in front to the vasilar, and retrossal processes, behind the latter it is reflected inwards to become continuous with the tissue on the lower face of the plantar-cushion. The *posterior border* is oblique from before to behind, and above to below, and joins the preceding two. The *anterior border* is oblique in the same direction, and is united so intimately with the anterior lateral ligament of the pedal articulation, that it cannot be separated from it except by an artifice of dissection. It sends to this ligament, and to the tendon of the anterior extensor of the phalanges, a white fibrous expansion that becomes fused with that of the opposite side. The fibro-cartilages comprise in their structure a mixture of fibrous and cartilaginous tissue, though the mixture of these is far from being perfectly homogeneous, or everywhere in the same proportions." The cartilages of the fore-feet are thicker and more extensive than those of the hind ones, the inside ones higher than the outside, although sometimes in draught horses we have the opposite condition. The lateral fibro-cartilages are peculiar to solipeds.—*(Chauveau).*

The symptoms exhibited by sidebone lameness are often difficult and obscure to diagnose correctly. So that in some cases where the sidebone is of slow and slight formation, the lameness is intermittent, and probably accompanied with local swellings of other joints. It is then almost impossible to at once determine that sidebone is the radical cause. You may by a process of synthesis arrive at a conclusion in your own mind, and find out by treatment that you were probably correct ; but the fact remains unproved unless demonstrated by a dissection, and this especially where the base of the cartilage, in proximity to the wing of the pedal bone, was the only affected part.

"The determination of sidebone is best effected while the horse stands fairly upon his feet, when any rigid state of the cartilage is felt, and more especially can a deposition be felt along the *upper border* in this position than by any other. The lifting of one foot is to be deprecated in making an examination of the lateral cartilages,

as this renders the cartilages more tense and apt to lead one into the supposition that the base of one or both was diseased."—(*Pritchard*). When the cartilages have been examined in the foregoing position, they may then be tested by any other method, and by the forced flexion of foot which causes pain where sidebones are present. The manifestation of lameness—tumefaction, degree of soreness on pressure, with more or less heat adjacent, varies in character according to the stage of disease, and environment of the case.

The complications of sidebones are the diseases and defects of the foot, such as false quarters, solution of continuity, thrushes, canker; others of deeper interest specially those of the keratogenous apparatus, such as laminitis, with its complications and sequelæ, keraphylocele, accidents with suppuration accompanying the several diseases of the foot, bruised heels, corns: others results of shoeing, pricked, tight shoe, bruised sole; and others the vices of conformation, as contraction of the heels, flat foot, pumiced foot, crooked foot, rammy foot, and lastly, the foot with bad horn.

The change causing the formation of sidebone does not take place in early life—there is no record of its occurrence among foals—it usually makes its appearance about six years. "It is stated that they are now more common among draught horses than 40 or 50 years ago."—(*Dewar*). This may be due to the popular fallacy in the tendency of breeders to ignore this disease in the draught horse. The period of duration in their formation is from months to years, and ceases when complete ossification has taken place. So that the prognosis is uncertain, once existing they have a tendency to increase to certain stages, may remain stationary for a time, or go on to complete formation. The causes which determine the change cannot in the strict sense of the word be classed as idiopathic; but many are traumatic, climatic, and due to an inherited tendency. Being cartilages of prolongation they are subject to the effect of ossific diathesis, which is a pathological and not a physiological process, the immediate cause being a faulty development which prevents the elements from long maintaining themselves at the height of evolution, and causes their ossification. We know that sidebone forms after many extraneous causes such as removing from pasture to dry paved ground, which causes a dry condition of the hoof. Unskilful shoeing is a frequent cause especially in the draught horses. The formation and nailing of the shoe, especially at the heels, causing an abnormal amount of stress on the part, sets up an inflammation which often terminates in an ossific change of the cartilages. We may have them as a sequel to navicular disease, and blows during work.

The much vexed question of soundness taxes frequently the abilities both of veterinarian and breeder, and much heat and temper is often evinced at shows throughout the country; but if sidebone is present in any degree there is no doubt that it constitutes an unsound horse, and unfits for breeding. For work the unsoundness may be looked at in a different light, and advice given in accordance with the work the horse has got to do. The owner must be made acquainted with the unsoundness, and the veterinarian's advice tendered in reference to the horse's value for work. There, I think, our duty ends.

Treatment.

In considering the treatment of "sidebones" it may be stated at the outset that our treatment must vary, as each case may require a special line to go on. All methods may be classed under three divisions: Prophylactic, temporary alleviation, and curative.

In the treatment of foot cases there is much hypothesis of opinion, but most are at one in the part the lateral cartilages exercise over the movement of the hoof. "We know that the plantar-cushion consists of a network of white fibrous tissue having a strong band running transversely across from one lateral cartilage to the other, and being firmly connected to those structures. Now when the horse puts his foot upon the gronnd and rests his weight upon it, the pastern descends backwards and thereby presses on the plantar cushion. The result of that pressure is to put the weight upon the middle of these transverse fibres, and the effect of pressing down the transverse fibres of the cushion is to draw in the two cartilages to which it is attached. When, then, the plantar cushion is able to yield downwards, as it does when nc frog is between it and the ground, we have contraction of the heels at the coronet; but if you have a frog taking its proper bearing upon the ground the plantar cushion cannot yield downwards. It is pressed above by the bones and below by the frog, and the soft tissues are thus driven outwards causing expansion upon the top of the coronet. The whole thing depends upon the frog and the pressure downwards of the pastern bones upon the plantar cushion."—(*Hunting*).

The best prophylaxis then is to maintain the frog in a natural condition, and keep the hoof in a normal hygroscopic condition. Where we have a dry condition of the hoof the employment of ointments is indicated, where we have too much moisture the removal of the horse to dryer quarters remedies the condition. Where contraction of the foot is taking place relief to the cartilages must be given by sawing the walls of the hoof and unsoleing the foot, a well-fitting round shoe applied with a stopping and leather sole, and this method resorted to again if contraction is still present. For it has been pointed out that if a contracted condition of the foot is allowed to be maintained the effect of the lateral cartilages is to drag them inwards and downwards to an unnatural and inordinate extent each time the weight comes on the bony column, setting up a chronic inflammation in the synovial membrane and bone from which the cartilages derive their nutriment, resulting in change in character of the cartilage terminating in the formation more or less of sidebone.

The tumefied condition of the coronet from unskilful shoeing is best relieved by removal of the shoes, shortening the toe, poulticing the foot for 24 hours, and then adopting a light shoe. After treatment may either consist in constant cold irrigation, or actual cautery deep into the substances of the swelling with the pyro-puncture and a blister put on. The method to be adopted varies according to the exigences of the case.

Sidebone once formed can only be alleviated, and much in this way can be effected with the shoeing.

To modify defects in action. There are two conditions which come more frequently before us. The horse that goes on his heels and the other which goes on his toes. The result is excessive wear of the shoe at those parts. To meet this, we often see the shoe thickened at the spot. In these cases I find that the horse always goes best when the shoes have been on some time, and worst just after being shod. When an engineer finds excessive wear at some part of his machine he does not thicken that part, on the contrary follows the indication that there is something superfluous there—something in the way—and he removes it. We also should, I think, *follow the indication of the horse*, and instead of forcing the part into greater attrition, do the opposite, that is remove it from wear as much as possible. If it be the toe, shorten the toe of the foot, and turn up the toe of the shoe, following as near as possible the line or curve of wear shown by the old shoe. If it be the heel, lower the heels of the foot, lengthen the heels of the shoe, and curve them slightly upwards in imitation of the form of the old shoe produced by wear.—(*Hunting.*)—Similarly in shoes with calkins, the same principle applies, and also when wear is excessive upon either the outside or inside branch of the shoe—lower the wall on the worn side.—(*Hunting*).

There are many other points in shoeing I might touch upon, but my object is not to be exhaustive, but only suggestive.

There is another point I should like to introduce to your notice before leaving the subject of shoeing, that of concussion. So long as we have a natural concession of integrity of the hoof, sole, frog, plantar cushion, lateral cartilages, and obliquity of the pastern, there is no jar, hence no concussion. When, however, some disease or injury happens then the foot is easily jarred. It is, therefore, necessary to guard against concussion even when no disease exists; but when the change of action indicates to the scientific observer that pain exists. The degree varies from "not going as free as usual" to "going decidedly short." The lines to follow are, I think, to protect the part, and relieve pressure. The practice of sawing the wall only for sidebone I have found to be a cause of developing a keratomatous condition of the hoof wall over the seat of sidebone, developing a lameness that is difficult to eradicate. From the fact that the keratogenous membrane once developing a tendency to keratophylocele, the keratoma even after removal has not unfrequently returned. Those of you who have practised unsoleing with sawing the wall will, I think, be able to bear me out in this contention.

The curative treatment of sidebone is its removal, and even then it is not a cure, as neurotomy has frequently to be performed to get rid of the manifest lameness exhibited, and this is found to be the case where the sidebone is large at its junction with the os pedis. So that when this is the condition it may be taken that there is no cure for sidebone. I consider it good practice to remove the sidebone ere resorting to neurotomy.

The steps in the operation for removal of sidebone are similar to that of removal of cartilage for quittor. I think Dr. Fröhner's description of Bayer's method of extirpating the lateral cartilage of the foot to be the best to go on. It consists in tearing off a half moon shaped piece of horn over the cartilage, dissecting up and hooking back a flap consisting of sensitive wall, coronet, and skin of the pastern without transverse injury to the coronary cushion, extirpation of the cartilage or sidebone thus laid bare, and suturing the flap of sensitive wall, coronary cushion and skin.

Discussion.

Mr. W. Anderson: It has afforded me great pleasure to listen to Mr. Miller's paper, and though I agree with him in the main, there are some points where I disagree with him. I am surprised to hear him blaming the sawing operation for some new disease which he calls keratophylocele. I have operated dozens of times and never had any bad results, though occasionally perfect relief from lameness has not followed, but I have never seen this keratogenous material. I expect that what Mr. Miller refers to is the material thrown out between the two parts by the inflammatory action in the laminæ caused by the process of sawing, but to call it a disease is carrying it too far. I have never excised the lateral cartilage for sidebone, but have removed it for quittor. I think that to remove it *en bloc* for sidebone would be a critical operation, when you consider the loss of protection to the inner integuments which would result.

Mr. Renfrew: I have also had much pleasure in hearing Mr. Miller's paper, and, like Mr. Anderson, I have reason to agree with him in some points and disagree in others. He has failed to make it plain whether in this disease we have "calcification" or "ossification," and if we knew that it would materially help us in the treatment. Like the Essayist I have seen sidebone result from removing an animal from soft to hard ground. I have also seen the bad results he refers to after the sawing operation. Twenty years ago at the Glasgow Veterinary College an operation was performed for the relief of sidebone lameness, with much success. The pressure of the horn was removed by thinning down the horn with searcher and rasp, and there is no tendency to bad after results from this operation. In excision of the cartilage I don't understand why Mr. Miller would have us be so conservative of the coronary band. It is more easily reproduced than any other tissue on the body. It heals too quickly, in fact the difficulty is to get healthy action established in the bone before the band closes in. With regard to Mr. Miller's remarks on shoeing, he might explain what he means when he says that bad and tight shoeing produces sidebone.

Mr. Anderson; Mr. Renfrew has condemned the sawing operation and says he has had bad results, but he does not tell us what the bad results were. I will relate to you a cure which will illustrate the efficacy of this new treatment of sidebone. This was a horse in the Highlands lame in both fore feet from sidebone for years, and I was called in consultation. It got pricked by the heel nail and suppuration extended to the hoof head, causing bulging of the hoof. When the hoof got better the sidebone lameness was gone. Seeing what had occurred the other foot was intentionally pricked at the same place with the same result and disappearance of the old lameness.

Mr. Renfrew: I did not condemn the sawing operation, but what I say is that the operation by rasp and searcher is just as effectual and there is no need to butcher the foot. The case which Mr. Anderson has just related, you will agree, supports my contention..

Mr. Bishop: I feel personally indebted to Mr. Miller for preparing a paper on such a practical subject. I have performed hoof section 20 or 30 times. With the ordinary saw, which has the teeth all looking one way, I found the operation very tedious, so I got one made with teeth cutting both ways. If you first thin the hoof well before using the saw, the operation is much easier. I have never seen the bad results spoken of follow the operation, and I saw deeply, in fact till the dust assumes a pink colour from the first appearance of blood. I have found the operation a great boon in a stable of short-legged cart horses I attend, many of which are lame from sidebone. I remove the shoe, shorten the toe, clean out thoroughly between the sole and wall, then thin the wall, and with the saw make three, four, or five incisions dependent on the length of the sidebone. I then have a bar shoe put on and blister the coronet. In four days the horse is very lame, when I apply cold swabs to the hoof-head and clay to the foot. My mind is not fully made up whether the pain which gives rise to the lameness in a case of sidebone is caused by its pressure on the tissues. If it is due to the pressure recommend me to the sawing operation. In shoeing a sideboned horse you can't keep him too near the ground, and a round plate is the best.

Mr. Imrie: The first time I tried the sawing operation I had bad results and got a fright, and since that I have always used the rasp and a special searcher, and I can thoroughly recommend this operation. The fact that you can get somebody else to do the work while you look on and instruct may commend this operation to those of you who think as I do.

Mr. Bishop: I once performed the sawing operation and no good resulted. However, two months later the horse died of a stomach complaint. I got the foot and boiled it down and there was a deposit of bone right round on the pedal bone, and also on the os coronæ, and to that I attribute my failure. Some sidebones are high up and cause no lameness, while others are low and are sure to produce lameness, and it is my opinion that a deal depends on the position of the cartilage whether a sidebone will give rise to much lameness or not.

Dr. McCall: I have really very little to add. The subject has been so well discussed by those who have already been on their feet. I have performed the operation often for sidebone, but have got best results in

horses lame from contracted narrow feet when no sidebones were present. In 14 days the heels have expanded quite ¼ of an inch, and animal quite sound in a month. One animal went lame again some months afterwards and the operation again relieved it. It is six months since I operated last, and the horse has been going sound at the coast, but he is just getting lame again and I intend to repeat the operations to-morrow. Mr. Millar said he could determine the presence of a sidebone best when a horse was standing. This is not my experience, and I always lift the foot and work the alæ with the fingers, when I consider there is little chance of making a mistake. I do not consider the complete extirpation of sidebone a very practical operation in every case, for it must be a long time before an animal is fit for work, and the probability is that by the simpler operation the animal could be fit for work in two weeks.

Mr. J. B. MACQUEEN: I am of opinion it would take six months for the foot to recover from such an operation. Unlike Mr. Renfrew, I do not believe in meddling much with the coronary band, for though it heals readily as sure as you take a bit out you will have a false quarter.

Mr. MILLER: I am pleased my paper has given rise to so good a discussion. I feel sorry that my old friend Mr. Anderson has not till now heard of the bad results of the sawing operation. I may say that it sometimes takes two years before the tumour referred to has grown. With regard to Mr. Renfrew's remarks about calcification or ossification I think it might be either. No definite line can be drawn between them. In cutting the coronary band there is less tendency for the hoof to suffer if the incision is made oblique instead of vertical. A horse takes six weeks to get better after excision of lateral cartilage.

Professor MURPHY then read a short paper "On Several Parasites of the Domesticated Animals," particularising a case of echinococcus polymorphus in liver of cow. This liver, which was quite unrecognisable as such, being an example of almost total invasion, weighed in all over 117 lbs. On section it was seen to consist of one enormous honeycombed mass, the meshes of which were filled with cysts from the size of a millet seed to that of a hen's egg. Many of the cysts he got out entire, and so was enabled to evacutate their contents for microscopic examination, which showed numberless scolices. His remarks were illustrated with spirit preparations.

At the request of the President, Mr. Jno. Renfrew, Glasgow, promised to provide a paper for the next annual general meeting.

Votes of thanks to Mr. Miller, Prof. Murphy, and the President brought the meeting to a close.

ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

An ordinary general meeting was held on Friday, November 26th, at 10 Red Lion Square, the President, Mr. Albert Wheatley, F.R.C.V.S., Reading, was in the chair; and there were present: Messrs. J. Sutcliffe Hurndall (hon. sec.), J. P. S. Walker (treas.), T. W. Lepper, F. W. Wragg, Jas. F. Simpson, Sidney Villar, Sydney H. Slocock, and Wm. Wilson; and Messrs. H. M. Singleton and W. F. Barrett, visitors.

THE NATIONAL BENEVOLENT ASSOCIATION.

On the minutes of the special general meeting held on the 9th July last, to consider Mr. Mahon's letter on this subject,

Mr. BARRETT, as a member of the Central V.M.A., said the President of the Central would be very glad of a communication from this Association, as it was felt the less delay there was the better it would be. He thought they were waiting for communications from the various associations before taking definite action.

After some discussion, it was unanimously resolved, on the motion of Mr. Villar. seconded by Mr. Wilson, that the matter be referred to the next general meeting in February.

THE VISIT OF THE NATIONAL ASSOCIATION TO READING.

The HON. SEC. (Mr. Hurndall), and Treasurer of Entertainment Fund Committee, presented a highly satisfactory balance sheet.

Mr SIMPSON expressed the great indebtedness of the Association to Mr. Hurndall for the success of the Berkshire gathering; and moved a vote of thanks to that gentleman, to whom, he said, a great debt of gratitude was due. (Applause).

Mr. WILSON, in seconding, said the river trip had proved most enjoyable, and although the Secretary had been ably assisted the labour and burden had necessarily fallen on him. (Hear, hear).

The resolution was carried by acclamation, and ordered to be entered on the minutes.

Mr. HURNDALL expressed his high appreciation of the kind words which had emanated from Messrs. Simpson and Wilson, which had received the cordial support of the meeting in general It must be a great satisfaction to any man to know that he had been instrumental, however humbly, in contributing to the pleasure and well-being of those with whom he was intimately connected. That certainly was the case with him on that occasion. He certainly set himself to make the affair a success, and that it was so was in no slight measure due to the co-operation of Mr. Wheatley and Mr. Simpson. He knew their guests were immensely pleased with what they as a Society were enabled to do on that occasion. He was amply rewarded by their kind words and by the knowledge that they had given pleasure to their friends, whose presence that day they valued very highly. (Applause).

FINANCIAL.

Mr. WALKER (treas.) presented his annual financial statement. The balance on the 26th November last was £86 6s. 1d., and members' subscriptions received during the year £26 15s. 6d., total £113 1s. 7d. Accounts paid totalled £60 7s. 2d, leaving a balance in the bank of £52 14s. 4d. There were 52 members on the roll.

The Treasurer's report, which was considered very satisfactory, was adopted on the motion of Mr. Wragg, seconded by Mr. Lepper.

ELECTION OF OFFICERS.

The PRESIDENT said it was usual for the senior vice-president to be asked to accept the chair for the ensuing year; and he thought they were very happy this year in having an exceptional senior vice-president, and one who would, he was sure, commend himself to all. Mr. Lepper's name was so well known and respected in the profession that he need say no more. He had very great pleasure in proposing that Mr. Thomas W. Lepper, of Aylesbury, be the President of the Association for the ensuing year. (Applause).

Mr. WRAGG had very great pleasure in seconding the nomination, being sure that Mr. Thomas Lepper would occupy the chair to the advantage of the Association and with credit to himself. (Hear, hear).

The vote was passed with the most cordial acclaim.

Mr. LEPPER said it was extremely kind of them to exalt him to that high office. When Mr. Hurndall mentioned the matter to him he certainly at first felt inclined to decline to take the office; but on second con-

sideration he saw that if it was really the wish of the Association it would be somewhat ungracious and ungrateful on his part not to accept it. Although he knew his many shortcomings, he hoped their good old Society would not be a loser in any way while he was its President. He thanked them very much. (Applause).

Messrs. Albert Wheatley, Sidney H. Slocock, Geo. E. King, and Sidney Villar, were unanimously elected vice-presidents for the year.

Mr. WILSON moved and Mr. Hurndall seconded, in complimentary terms, the re-election of the treasurer, which was carried with acclamation.

Mr. WALKER thanked them very sincerely for the compliment. He had wished they would relieve him of the office, but if they would not do so he should have great pleasure in serving. (Applause).

The re-election of the Secretary, proposed by Mr. Walker, and seconded by Mr Simpson, was agreed to in a similarly cordial manner.

Mr. HURNDALL expressed himself as much gratified with the confidence the Association had again reposed in him. As he had said on every previous occasion, as long as he undertook that work he would seek to do it to their satisfaction, and, he hoped, to his own as well. (Applause).

PLACE OF NEXT MEETING.

Mr. WILSON proposed and Mr. Lepper seconded, that the next (the annual) meeting of the Association be held at Reading on the last Friday in February, and the motion was agreed to unanimously.

APOLOGIES

Were announced by the Hon. Sec. from Professor McCall and Messrs. G. E. King, A. L. Butters, T. B. Goodall, H. G. Rogers, P. Irving, and Charles Carter.

TETANUS: ITS PREVENTION AND CURE.

By SIDNEY VILLAR, F.R.C.V.S.

Mr. President and Gentlemen,—In introducing to your notice the subject of tetanus I feel an apology is due from me for asking you to consider so common a disease, one with whose clinical symptoms we are all so familiar —too familiar probably in the case of many of us, but I am prompted to do this by the just now frequent allusions both in the medical and lay press to the new method of treatment for the prevention and cure of this terribly painful and frequently fatal disease, and I hope that to some extent my paper, and in a great degree the discussion which may follow, will serve to bring to our minds some detail which individually we may have overlooked or forgotten, so that at our parting this evening we may be conversant with the most recent theories as to the actual cause of tetanus, the manner in which the pathological conditions are produced and the steps which may be taken to prevent altogether, or remedy as much as possible such conditions.

Unfortunately, the animal with which in veterinary practice we mostly have to deal, the horse, is very susceptible to tetanus. The ox does not take it readily. In a somewhat large cattle practice I have only seen three cases in that class of animal, two of which supervened on the operation of castration, and the third on a cut fetlock. Sheep also appear to be resistant, although I remember an outbreak in which a number of lambs were affected with the disease, the primary wound being the unhealed umbilicus.

The dog appears rather insusceptible. A clever theory to account for this was advanced by a friend of mine recently, it was to the effect that a dog always cleanses his wounds with his tongue and so removes the tetanic poison, this is however probably not the correct explanation, for it is found that when a dog or cat is inoculated experimentally with the tetanus organism it is difficult to get an animal affected; so that both dogs and cats appear to be naturally resistant to this disease.

I have never seen tetanus in pigs. A case is recorded in *The Veterinarian*, volume 67, where a pig recently castrated died of lock-jaw, and upon a post-mortem examination being made, some ashes were found in the scrotal wounds. Two cases in pigs are recorded in *The Veterinary Journal* of 1890, and five cases occurring simultaneously on one farm after castration are given in *The Veterinary Record* of July 10th, last. We must, however, remember that young pigs are very frequently affected with epilepsy, the symptoms of which to some extent resemble those of tetanus.

I have already used the terms tetanus organism and tetanus poison, so that perhaps this is a fitting opportunity to refer to these in detail.

In 1884 Nicolaier found that when a small particle of soil from the streets or the fields was placed under the skin of mice, rabbits, and guinea pigs, symptoms of tetanus of a progressive character followed in a few days, and that after death a small abscess was found at the point of inoculatiou, in the pus of which was an organism which, when re-introduced into a similar small animal, again produced tetanus. And it has since been demonstrated that if the pus from the primary wound of a person affected with tetanus be in a similar way inoculated into mice, rabbits, and guinea pigs, tetanus supervenes, and exactly the same bacillus as that got from inoculation with soil is found to be present. This organism, which is known as the tetanus bacillus, has since been absolutely separated from all other organisms found in the pus of wounds: it has been artificially cultivated apart from all such organisms, and such cultivations when inoculated into animals have produced tetanus, and upon post-morteming the inoculated animals the organism has again been separated from the pus of their wounds.

It has been laid down as an axiom, and is accepted generally by bacteriologists, that a bacillus which successfully passes through such a cycle as this establishes its right to be recognised as the specific organism, the rightful cause of its particular disease, and I think it can be accepted without doubt that a bacillus is the specific cause of lock-jaw; and we may go further and say that no case of tetanus can naturally arise without this bacillus being present in the animal body.

I have brought a specimen of the bacillus, thinking it might be of interest to some gentlemen present. It is known from its shape as the drum-stick bacillus, for it consists of a little filament or thread with a dilated rounded end; this rounded end is the reproductive particle, or spore. The organism is of course very minute indeed. Its other distinguishing characters are that it is motile or capable of movement, it is anœrobic, that is it cannot live in an atmosphere containing oxygen, its spore developes best at the temperature of the blood; when cultivated artificially it liquefies gelatin, and has a characteristic mouldy sort of an odour. In what is known as a stab puncture, made by pushing a soiled platinum needle into a test tube of gelatin, there is also a peculiar method of growth branching in a particular way from the needle stab and resembling the branches of a spruce fir tree. By its shape and such characteristics as these it is easily recognised from other bacilli.

When the tetanus bacillus gains entrance to the body through an abrasion of the skin, or a contused wound, it is found that under favourable circumstances it multiplies and is then to be found in the pus of the wound, and in the infiltrated tissues immediately around the wound, but it never exists in large quantities. Only a few of the organisms are ever present and they are invariably confined to a localised area and are never to be discovered in the blood or tissues in the internal

organs or central nervous system. In this it is unlike the bacillus of anthrax.

This limited localisation of the bacillus is accounted for by the fact that it will not live where oxygen is present, and it therefore only multiplies in the lower layers of pus of a wound, where it is cut off from the the oxygen in the air and also from that contained in the blood of the capillary blood vessels.

As with other bacilli the spore or reproductive particle will remain alive long after the other portion of the organism has perished—as long as 12 months—and only awaits a favourable opportunity to grow and develope. These spores of the tetanus bacillus seem to have a remarkably wide distribution. Bassano found it in 27 out of 43 samples of soil gathered in various parts of the globe. This observer made experiments which led him to assert "that soils which contain much organic matter almost invariably contain tetanus bacilli, and that defective drainage and imperfect general hygienic conditions are favourable to its existence. Mr. Stanley, the explorer, mentions in his work the fact that the native inhabitants of Central Africa dip the points of their arrows in the soil of certain swamps, with the positive result that their wounded enemy will die of lock-jaw. The same method of poisoning their arrows is resorted to by the Aborigines of the New Hebridies and other islands in the Pacific Ocean, and recognising this the French Government at the present day inoculate their soldiers to prevent them falling victims to this remarkable sagacity of the savage tribes.

But although the spores of the tetanus bacillus are widely distributed in the soil, some districts appear to be free from them, hence the facs that tetanus is not met with in all localities.

Thirteen years ago—that was long before the pathology of the disease was understood—Mr. Joseph Woodger, in a paper read before the Central Veterinary medical Society, pointed out the remarkable prevalence of tetanus amongst horses used in dust carts. Out of 96 cases which he recorded 37 were in horses used in dust carting, and in eight consecutive years he found that in this class of horse the number affected amounted to 3 per cent. per annum, whereas in omnibus horses stabled in the same neighbourhood, only 1·14 per cent. per annum became affected. Mr. Woodger was convinced that the fact of so preponderating a number of cases being found amongst dust contractors' horses is to a great extent due to poisonous emanations from the decaying heaps of refuse always present in dust contractors' yards, and one cannot but admire that gentleman's foresight and correctnesss of judgment in view of the fact that at the time he wrote the tetanus organism had not been recognised.

In my own practice in Middlesex there are two farms where the disease is specially prevalent, one of these at Alfreton is occupied by a farmer who habitually spreads on his fields large quantities of London refuse. At the second farm five miles away the bailiff bought two large loads of the sweepings from London roads in 1893 and dressed his home meadows with it. On these meadows his colts and young stock were pastured, and for 2½ years tetanus was endemic on his farm; during this period six colts became affected, and I believe only one entirely escaped the disease. It will doubtless occur to you that animals used or pastured where such refuse is deposited would be more than usually likely to be wounded by broken glass, nails, etc., and therefore more liable to tetanus, but it is an interesting fact that out of Mr. Woodger's 37 cases in only four horses were any wounds discoverable.

But the disease will be of an endemic character on farms and places altogether innocent of refuse heaps and dust contractors, and not only on particular farms and premises but in particular stables. I knew an instance where a veterinary surgeon attended three horses in one stable affected with the disease at the same time.

In a note to *The Veterinarian*, of 1894, Mr. Wheatley, of Reading, in recording a case of tetanus says, this horse was lying on peat moss, which probably conveyed the contagion, and he adds, since horses have been stabled on this litter I have had more cases of tetanus from wounds than I ever had before. Theoretically, this is exactly what we should expect, and it will be interesting to have the practical experience of you gentlemen as to this. For myself, I have had cases occur in stables where moss litter is used, and also where straw forms the bedding, but I always suggest that a wounded horse should not lie on peat moss, the more especially that in my neighbourhood there is somehow an idea amongst horse-keepers that peat moss is liable to cause lock-jaw.

Dr. White, a gentleman practising in Ceylon, where from the heat of the climate the natives wear next to no clothing and lie about a good deal on the ground, tells me that in that country almost every wound is followed by tetanus. In veterinary practice the ordinary operation for umbilical hernia is well known to be frequently followed by tetanus, this used to be ascribed to the irritation of the ligature used, but I think we must now attribute it to wound being in contact with the soil when the animal lies down. As in most country practices docking horses is a rather frequent operation with me, and it is noteworthy that in the only case in which tetanus has supervened, the animal on its way home after the operation broke away from the man in charge and got embedded in the morass adjoining the Welch Harp Reservoir at Hendon, it was with some difficulty got out of the mud and was noticed to be affected with tetanus on the 10th day after. It ultimately died.

Death in this disease appears to be actually due to one of three causes. Firstly, paralysis of the respiratory muscles. Secondly, to broncho-pneumonia associated with fœtid breath, and arising from the flow of putrid saliva, which cannot escape from the mouth, down the trachea into the bronchi. And thirdly, from starvation and exhaustion.

The next point which arises is, how do a few infinitesimally small bodies such as this bacillus in a wound, or in a well defined and localized area round a wound, produce such direful effects. The answer to this is—and it has been experimentally proved to demonstration—that the Bacillus during its existence and multiplication in a wound elaborates chemical poisons of a most deadly character, and that these poisons are absorbed into the system and produce the wide-spread effects. The process is therefore an intoxication or blood poisoning, and tetanus is now recognised as an "infective" disease. It must be remembered that the bacillus is a vegetable organism, indeed is a plant, and then it will be more clear how in the course of its life history it can elaborate poisonous alkaloids just in the same way as the Nux Vomica tree produces Strychnia and the Chinchona bush Quinine. These and many other poisonous substances are we know built up by vegetable cells and exert a specific action on animals. Just as strychina exerts its injurious effects through the nervous system, so do the poisons formed by the tetanus bacillus act.

It is an interesting fact that if an experimental animal is inoculated with a quite young artificial growth of the tetanus organism, the disease does not at once supervene, but if the inoculation is made with a growth, say ten days old, when some of the bacilli have had time to mature and perform the natural functions of their existence, tetanus rapidly follows. During the performance of such natural functions the active poison is, as we have already seen, produced.

It is probably due to the fact of the tetanus organisms forming their poisons so slowly that so many wounded animals in what may be considered infected localities or

stables, escape the disease, for practically we know that the organism must be introduced into the system of many wounded animals and produce no ill effects—the explanation appears to be that the poison is produced so slowly that in healthy tissues, such as in a clean cut or punctured wound, the tissue cells destroy the organisms introduced long before they have time to form sufficient poison to produce the nervous symptoms of tetanus; but in cases of contused wounds and punctures, such as are produced by pieces of wood, etc., the tissues are so injured that the Phagocytes or tissue cells are weakened, and are no longer strong enough to contend with the invading organism, which then multiplies and develops its poisons, which are absorbed and give rise to those reflex spasms and convulsions which we recognise as tetanus.

For the existence of tetanus, it is necessary that a wound of some sort, either of the skin or mucous membrane must have occurred. Tetanus is always traumatic, and the terms Idiopathic, which denotes arising without obvious cause, cannot properly be applied to this disease—the obvious cause is the Drum-stick baccillus, but the wound by which it gained entrance to the system may not be apparent, indeed the primary wound may be in the mouth, œsophagus or any part of the intestinal canal. A case is reported by Chincholi, in which a costive horse, whose fæces were covered with blood-tinged mucus, became affected by the bacilli gaining entrance through the abraded surface of the rectum: it is probable that the presence of worms, sand and foreign matters in the intestines which were formally assigned as causes of tetanus, produce wounds of the mucous membrane and so allow the bacilli to gain an entrance.

The experiments of Solmani, who fed very susceptible animals with large quantities of pure culture of the bacilli, proved that the virus of tetanus when introduced into the unwounded digestive canal produces no ill effects, and he also demonstrated that the gastric and intestinal juices do not destroy the virus, for he produced tetanus from the fæces of an animal which had been fed on the virus.

Cases are also recorded where tetanus has followed wounds of the mucous membrane of the genital tract produced in the process of parturition or abortion.

Recognising the bacillus as the cause of tetanus, we cannot now admit that the disease can be produced by exposing an animal to cold, or by over exertion or fright, nor from neglect in the treatment of, or the application of irritating medicaments to wounds.

Treatment.

For the purpose of considering its treatment, tetanus may be said to be either of an acute or subacute form; the acute being those cases in which distressing symptoms of great severity rapidly occur after the animal is first observed to be ailing, and which usually end in death about the fifth or sixth day; whereas in the subacute form the symptoms gradually develope and the spasms and convulsions are not severe, such cases do not usually reach their greatest severity until about the ninth day, and in my experience the majority of them recover. In these cases the ninth or tenth days seem a critical period, as it is not rare to find fatal lung complications develop about that time.

Tetanus appears to supervene on trivial wounds quite as readily as after severe injuries. Wounds of the feet, limbs and head have in my practice been more often the origin of tetanus than those on the body. There is no definite period of incubation in this disease; the earliest period that I can call to mind at which tetanus has supervened on an injury is the sixth day, and the latest period just over three weeks. The interval which elapses between the reception of an injury and the occurrence of manifest symptoms does not influence the course of the pisease; whether the period be short or long, it is equally liable to take an acute or subacute course. Cases are recorded where tetanus supervened an hour or so after the infliction of an injury, but bearing in mind the modus operandi of the specific organism one *must* think that a primary wound was previous in such cases, and the second injury a coincidence.

Very interesting reports have recently been published where tetanic horses have recovered after being treated by inoculation with anti-tetanic serum, the recoveries being presumably due to the beneficial action of that agent. I have used it as a curative in two cases only, and in both the horses have died; in each the disease was of an acute character and had manifestly been in existence for at least three days before inoculations were made. The first case, a hunter, was injured on December 26th, and was observed to be stiff and unwell on 7th January. On 10th 100 c.c., that is about 3½ ounces of serum from an immunised horse, was injected into the muscles of his neck, and he was placed in slings. At this time the symptoms were very marked, the horse was sweating, and the paroxysm were frequent and severe, the superficial muscles being "as hard as a board." Twenty-four hours after, at which time he received another 100 c.c. into the opposite side of his neck, there was a very distinct improvement, the horse's tail was flaccid and could easily be moved in any direction, the ears were less stiff, and the feel of the body was much softer, the spasm of the mastigatory muscles were somewhat less tonic, and there was unquestionably more capability of movement of the jaws. I was delighted with the prospect, but all hope was lost on the third day, for pneumonia and a fœtid breath were very evident. Somewhat foolishly perhaps, a third injection of 100 c.c. was then made, and a fourth of 30 c.c. on the fourth day—the horse died during the night. The second case was that of an aged pony, to which attention was first asked on 5th of the month, when all the usual symptoms of acute tetanus were shown. This animal received injections of 2½ F. drachms of anti-tetanic serum on the 6th, 7th, and 8th, but showed no remission of symptoms throughout, and died on 8th of the month. There was no obvious wound in this case. The serum was obtained from a firm of chemists.

During the present year, in addition to the above I have had five horses with tetanus; two of them being of little value were at once destroyed, the other three have recovered and are now at work. All three were subacute cases, two of them were slung and given a little belladonna, also some nitrate of potash when their legs became swollen from standing. The third case, a well bred mare, about 10 years old, was at grass throughout the attack, and recovered without treatment. Recently cases of spontaneous recovery in the horse have been recorded, and I have had previously two cases similarly recover without treatment.

In the three favourably ending cases above referred to, the serum treatment was not employed, and it would be unfair to judge of its utility from its having failed to cure in two very severe cases, especially as there was delay in having recourse to the treatment. Nevertheless, the published experiences of persons who have used it on a very extensive scale can but lead us to the opinion that, although it is capable of causing an abatement of the severity of the symptoms it cannot be looked upon as a specific cure for tetanus when once that disease has developed. In the current number of *The Journal of Comparative Pathology and Therapeutics* it is stated that out of 19 cases of tetanus in the horse treated at the Berlin Veterinary College by intervenous injection of tetanus antitoxin between June and September of this year, 16 cases have proved fatal. In the same publication is a most interesting and instructive communication by Professor Nocard, who in a series of experiments on living horses injected large doses of the anti-tetanin into the jugulars of five horses which were only just begin-

ning to show symptoms of tetanus, yet all five horses died of the disease. You will remember that it was this gentleman who first brought anti-tetanin to the notice of the veterinary profession, for over two years he has been an enthusiastic worker with the serum, yet so recently as August last he wrote that "the cure for tetanus has still to be discovered, and that he who by injecting serum counts on curing the majority of his patients will expose himself to a cruel disappointment," and he further observes that in the practical use of serum by veterinary surgeons the percentage of recoveries had not been higher with its use, but that in cases where it has been injected the convulsions have been less numerous and less intense, and when recovery has supervened, convalescence has been more rapid. In *The Veterinary Record* of October 2nd last, Major Nunn records the case of a nine-year old mare very severely affected with tetanus, she received eight doses of serum at intervals of 24 hours, and made a very rapid recovery. Other successful cases in which recovery has been rapid are recorded by Messrs. Fraser, Reeks, Heatley, Sparrow and others.

The usual duration of an attack in the horse is six weeks, and there appears no doubt that this period is considerably shortened by the systematic use of antitetanin, which acts as an antidote to the poison which is being continually formed by the bacilli at the wound. Having regard also to the constant formation of toxin it is advisable, if possible, to eradicate the focus of the disease. In cases where the disease follows on docking, this is easily done by amputating a further portion of the tail, but in all other positions it is difficult except by making use of caustics, and these in our patients must be unsatisfactory. In addition to subcutaneous doses of antitoxin, I strongly advocate putting the animal in slings, and ensuring him as perfect quiet as possible, a laxative and nutritious diet, and as medicine only an occasional diuretic I am altogether an unbeliever in the use of aloes, as it nauseates and takes the horse off his feed at a period when it is absolutely necessary that he should take all the nutriment the state of his jaws will allow.

A continental authority advises the injection of the serum directly into the jugular vein, and claims that by so doing there is a gain of 24 hours in the treatment of the disease. I have never seen or heard of this being done in this country, but bearing in mind the want of success in the Berlin and Paris cases already quoted where this method of procedure was employed I am sceptical as to the statement.

One detail should perhaps be mentioned, namely that where it is necessary to inject large quantities of serum, say 50 or 100 c.c. it is advisable to plunge the needle of the syringe right into some of the muscles, preferably into those of the neck, if such quantities are placed quite subcutaneously there is a danger of the skin sloughing.

Although one is not now in a position to ascribe great curative power to antitetanic serum, there is very strong ground for recognising it as a prophylactic—a very certain preventative of the disease. I have in numerous instances inoculated wounded horses, both with the consent and without the knowledge of the owner, and have never seen any ill effect from its use. On one of the two farms to which allusion was made in the earlier portions of this paper, and on which usually about 23 horses and seven colts are kept, there occurred in the 5½ years previous to July 1st, 1896, ten cases of tetanus, namely eight cases in horses, one bullock and a donkey, this disease has existed on the farm for the last 20 years, and is in fact the bugbear of the place. I cannot call to mind a single case of external injury during the period I have attended prior to July 1st., 1896, which was not followed by tetanus. Since that date there has been three cases of wounds in horses on this farm which I have treated—the first in a gelding, a severe laceration of the skin and flexor tendons just above the fetlock of the near fore leg, then a mare with badly broken knees, and thirdly a two-year-old colt with a deeply cut wound in his heel, caused by barbed wire in a fence ; each of these animals has been inoculated, two of them twice, and one on a single occasion, with antitetanic serum ; each has continued in perfect health and shown no sign of tetanus. Of course I cannot pretend to say that they would otherwise have been victims to that disease, but having regard to the history of their surroundings there is a very great probability that some of the three would have been attacked. Professor Nocard says that when employed as a preventative antitetanic serum is absolutely efficacious, and one cannot read his article and the statistical tables which he gives without being struck by the fact that he has the very best of grounds for coming to this conclusion. Tetanus is very prevalent in some localities in France, and the Professor has distributed antitetanic serum to 63 veterinary surgeons, who have treated for the prevention of tetanus 2,727 animals with it, of the animals so treated only one became affected, but during the same period these 63 veterinary surgeons saw 259 cases of tetanus in animals not so inoculated. Moreover it is noteworthy that the horse which did become affected was not inoculated until five days after being pricked in shoeing ; although the delay was too great to prevent the appearance of tetanus, the disease was quite of a mild type. So slight indeed was the attack that the horse was able to resume work within a fortnight.

As a preventative, from 2½ drms. to 5 drms. of the serum should be used, it should be injected as early as possible after the wound is inflicted, and the dose should be repeated after an interval of 10 or 12 days.

I can give no detail as to the period of immunity which is conferred by the serum, one would, however, expect it to be of only short duration, seeing that the active immunity conferred by a natural attack of the disease is only of a transient nature. Our worthy President has recorded the case of a horse which recovered from tetanus, but at an interval considerably under two years was again attacked with that disease. Personally I treated a black filly which recovered from an attack in September, but again fell a victim to the disease in the following July ; this case occurred on the second of the two farms to which allusion has frequently been made. Probably some gentlemen here present will give us details of cases where such preventative inoculations have been made. It would be specially interesting to hear of a case where such have been used, and have not been successful in staving off an attack of tetanus. Personally I feel very confident that there is a great future in store for antitetanic serum, that in the course of time it will be generally employed as a prophylactic in all cases of wounds from which there is reason to fear tetanus may follow. It is quite certain that with ordinary care as to its use there is absolutely no danger to our patients by injecting it. The syringe and its needle, if made of suitable material, should be boiled before use, this will render it aseptic—failing this wash it in water, then in alcohol, and finally in ether.

In addition to inoculations it behoves us to keep the wounds clean by antiseptic dressings, and to take care that the animals' surroundings are as hygienic as possible. In the present state of our knowledge it would be unwise to allow a box or stable in which a case has stood to be again occupied before a thorough cleansing and limewashing has taken place. I think we may also fairly say that the dressing of pasture lands with the scrapings from roads and dust contractors' refuse is to be deprecated.

As I have opportunities of seeing the process, perhaps a few words as to the mode of preparation of the serum will be of interest to some of you. A young horse in good condition is selected, and is tested with mallein and

tuberculin to ensure its freedom from glanders and tuberculosis. An artificial cultivation of the tetanus bacillus in broth is grown for 4 or 5 weeks, it is filtered through porcelain, and a very small quantity, about half a drop, of this filtrate is injected subcutaneously into the horse. On the third day the dose is repeated, if the animal shows no sign of tetanus, about the third day after a whole drop is injected, and for several months the process is repeated with continually increasing doses of the poisonous filtrate until the horse's system is so resistent to the poison of the bacillus that he will take large quantities without ill effects. Thus, at a period of six months after the first injection he will probably be unaffected by a dose of two ounees, and at the end of 12 or 18 months as much as a pint, or even more, can be injected with impunity. At frequent intervals during this process a small portion of blood is taken from the horse and the potency of its serum tested experimentally with mice and guinea-pigs. When it is found to confer sufficient immunity the horse is periodically bled by piercing the jugular with a trocar connected by sterilised tubing with a sterilised and sealed glass flagon, the blood obtained is allowed to coagulate and its serum is separated and filtered for use. After the blood has once acquired a sufficient protective power to be serviceable, the horse will without further dosing continue to supply potent serum for a long but varying period of time, and it is necessary to continually test the supply experimentally.

The serum may be obtained from the vendors either in a liquid or dried state, the latter which will retain its potency for a long period is prepared by dessicating the serum *in vacuo*, and for use must be ground up in six times its weight of distilled water.

Some will be inclined to ask how such serum exerts its protective properties. I cannot answer the question —certainly I think it is not a chemical antidote, but it is an established fact that susceptible animals adequately protected so as to reach the highest possible degree of immunity from infections with pathogenic bacteria, or from intoxications with their chemical products are capable of supplying a serum which, injected into other susceptible animals, will protect them against like infections and intoxications, and also in some cases have a curative effect. How it is capable of exerting this power seems to be unknown. Various hypotheses have been advanced, and I cannot do better than quote from an article by Dr. Kanthack, published only last year. He says "the mechanism of immunity, whether acquired or natural, specific or general, is still hidden from us, and we cannot as yet lift the veil; yet the recent past has revealed so many marvellous facts unto us that we may confidentially look to the future for more light." (Allbutt).

Before concluding let me point out that there is no universal method of standardising the strength of serum. We are compelled to accept the word of the manufacturer as to its strength and the dose we should administer; unfortunately a commercial spirit seems to have pervaded some of the vendors so that they advertise in a puffy way, worthy of cocoa or soap; it behoves us not to pay too much attention to this, but bearing in mind that the serum, from the cost involved in its preparation, must be very expensive, buy only from well known sources.

At a Council meeting of the Hunters' Improvement Society (President, the Earl of Yarborough) held at 12 Hanover Square, London, W., on Monday, December 6th, several candidates were elected members, including Mr. E. Franklin, M.R.C.V.S., Upper Butts, Worcester, and Mr. John Young, M.R.C.V.S., The Crescent, Bromsgrove, Worcestershire.

THE NATIONAL VETERINARY BENEVOLENT AND MUTUAL DEFENCE SOCIETY.

The annual general meeting was held at the Grand Hotel, Aytown Street, Manchester, on Thursday, Dec. 2nd, 1897 Geo. Morgan, Esq., president, in the chair. There were present: Messrs. J. McKinna, W. Woods, J. H. Carter, E. Faulkner, J. S. Carter, A. Lawson, J. B. Wolstenholme, W. A. Taylor, T. Hopkin. J. Abson, J. E. Scriven, A. W. Mason, J. W. Ingram, R. C. Edwards, J. E. Kitchen, E. S. Gubbin, and the Secretary.

Minutes of the last annual meeting were read and confirmed.

Letters of apology for non-attendance were received from Messrs. A. L. Butters, J. B. Tutt, W. Carless, F. W. Wragg, J. Clark, and H. Olver.

Letter was read from W. Whittle, Esq., tendering his resignation as a member of the Society, and also his position as trustee, in consequence of his retirement from the profession. General regret was expressed, as Mr. Whittle was one of the oldest members, having joined at its commencement, some 30 years ago. The Secretary was requested to write Mr. Whittle expressing their regret, and hoping he would still retain his connection with the Society in his capacity as a Life governor.

The PRESIDENT then addressed the meeting, alluded to the past history and early struggles of the Society when originated by the Lancashire, Liverpool, and Yorkshire Societies, and expressed his belief that it would have been a success if confined to these societies, as they, in those days, contained the giants of the veterinary profession, some of them now departed, who did good work in their day and generation, amongst whom were Lucas and Friend, of Liverpool, Lawson, Greaves, Peter Taylor, Tom Taylor, of Manchester, Dray, of Leeds, Cartwright, of Sheffield, Hurst, of Birmingham, Naylor, of Wakefield, and others. The Society was afterwards termed the National, meetings were called and held in all large towns, but they were badly attended, no interest was taken in the matter except by the founders and a few friends; circulars were sent out, and the matter brought before the veterinary societies. Some of our friends dub us the Manchester Society, when they know, or ought to know, it is no such thing, but a truly national one, open to all members of the profession. Thanks are due to those members who have spent a good deal of time and labour to make it a success. We have now ample funds at our disposal, and our southern brethren ought to show their sympathy by joining us and thus help in the good work.

The SECRETARY, in presenting his report, said it was his pleasing duty to give an account of the Society's proceedings during the last twelve months, it is quietly and unostentatiously doing a good work. Your Council have met twice, several cases having been brought before them, all of which have been settled amicably except one, which was tried in the High Court of Justice, London, and the case (unfortunately for the veterinary surgeon in question and the Society) was decided in favour of the plaintiff, with damages and costs amounting to £260, although apparently a simple case, which shows the advisability of all members of the profession becoming members of this Society, especially those just commencing practice for themselves.

Notice of motion of alteration of rules (suggested by the Finance Committee, some 18 months ago) has been given, and if passed will greatly extend the usefulness of the Society, and place greater responsibility on the office bearers, which I am sure will be gladly accepted. The funds of the Benevolent Branch will, under due investigation, be open to relieve non-members, their widows and children.

We have voted £10 to a daughter of a late member, but have had several applications from deserving cases, but were not entitled to assistance under our present rules.

We have had one application for a Free Studentship, and after due enquiry recommended him to Professor Williams, of the New Veterinary College, Edinburgh, who has very kindly accepted him on our behalf. He has not yet joined the College, not having passed his preliminary examination, but will no doubt do so at an early date.

I am sorry to report the resignation of W. Whittle, Esq., he is one of the oldest members, and has always taken a great interest in its workings. His retirement will necessitate the nomination and election of a trustee in his place. Eighteen new members have joined during the last 12 months, and we have lost five through deaths.

The TREASURER reported that the financial year ends on December 31st, when the accounts will be audited and balance sheet forwarded to each member. The balance in hand to present date is:

	£	s.	d.
Defence Account:			
Balance in bank	447	14	6
Subscriptions to date ...	106	16	6
Arrears, 20 members ...	23	12	6
Benevolent Account:			
Balance in bank	143	0	0
Invested Funds	3400	0	0

The TREASURER called the attention of members to the matter of arrears, some of the gentlemen not having paid for three or four years, although notices had been repeatedly sent them. After due discussion it was resolved "That the secretary be requested to write all members in arrears asking for payment of same, on or before the 31st inst., and if no attention be paid to same, Rule 2 to be put in force."

Mr. FAULKNER then proposed the following alteration of rules, Mr. Hopkin seconding:—

Preamble.—Line 17, erase "of its" and add after the word "members" "of the veterinary profession."

Rule XIII., (Defence branch).—Add after the word "funds" on the first line "of the Defence branch."

Rule I. (Benevolent branch).—Line 2, erase "of its" and add after the word "members" "of the veterinary profession.'

Mr. FAULKNER said that in the absence of Mr. Hopkin at the last annual meeting he had given proper notice of alterations of rules; meetings had been held to consider same, and members seemed to be in sympathy. Many cases had arisen which were no doubt deserving, some of us have given individual help but cannot grant from the funds. The time had arrived when we were in a position to alter the rules, our funds being ample. All deserving cases would be investigated by the Council, and while justice would be done to all applicants, our funds would be carefully guarded in their hands, and he felt sure the motion would pass unanimously.

Mr. HOPKIN was pleased to second the resolution, he said we were all conversant with the object—we had only given £10 during the year although we have over £100 coming in annually. No doubt some of our members were improvident, which, no doubt, caused a good deal of suffering in families, but at present we could not assist them. Under the new rules we would be able to grant help where needed and do a good work, making the society a truly benevolent one.

Mr EDWARDS and Mr. Mason supported the resolution, which was carried unanimously

Mr. SCRIVEN proposed to alter Rule XVI., line 5, erase "January" and add "August." Seconded by Mr. Woods and carried.

Mr. FAULKNER proposed, and Mr. Scriven seconded the following resolution, which was carried: "That the revised rules be printed and a copy sent to every member of the Society, also a few copies to be sent to the several veterinary medical societies with a note to the president and secretary, asking them to call the attention of their members to the fact that such a society as the National Veterinary Benevolent and Mutual Defence Society does exist, a society which is quietly doing a good work, and which every member of the veterinary profession ought to support."

The following were elected officers for the year 1898:

Patron.—General Sir Frederick FitzWygram, Bart., M.P.

Trustees.—A. W. Mason, Esq., T. Hopkin, Esq., R. S. Reynolds, Esq., John Lawson, Esq.

President: Mr. George Morgan, F.R.C.V.S., Liverpool. *Vice-president:* Mr. W. A. Taylor, F.R.C.V.S., Manchester. *Treasurer:* Mr. E. Faulkner, M.R.C.V.S., Manchester. *Honorary Secretary*: Mr. Sam. Locke, M.R.C.V.S., Grosvenor Street, Oxford Street, Manchester.

Council.– Messrs. A. L. Butters, M.R.C.V.S., London; J. S. Carter, F.R.C.V.S., Bradford; Tedbar Hopkin, F.R.C.V.S., Manchester; J. E. Kitchin, M.R.C.V.S., London; A. Lawson, M.R.C.V.S., Manchester; A. W. Mason, F.R.C.V.S., Leeds; R. S. Reynolds, M.R.C.V.S., Liverpool; J. E. Scriven, M.R.C.V.S., Tadcaster; R. C. Trigger, F.R.C.V.S., Newcastle-under-Lyme; Prof. W. Williams, F.R.C.V.S., Edinburgh; J. B. Wolstenholme, F.R.C.V.S., Manchester; W. Woods, F.R.C.V.S., Wigan.

Auditors: Messrs. Butcher, Lillan & Pownall, and Wolstenholme.

A vote of thanks to the retiring officers, and to the chairman closed the proceedings.

SAM. LOCKE, *Hon Sec.*

ROYAL VETERINARY COLLEGE V.M.A.

The 246th general meeting was held on Friday, Dec. 3rd, at 6.30 p.m. Mr. E. T. Goodall occupied the chair. There were present Mr. R. W. Hall (Hon. Sec.) and 50 members.

The following morbid specimens were introduced by Mr. R. W. Hall:—

(*a*) Part of an heifer's lower jaw showing irregular, and abnormal arrangement of the incisor teeth. This specimen was shown by the courtesy of Mr. Freer, F.R.C.V.S., of Uppingham.

(*b*) The heart of a cart colt showing the lesions of chronic endocarditis. This specimen was shown by the courtesy of Mr. E. R. Edwards, M.R.C.V.S., of Barton-under-Needwood.

(*c*) Three intestinal calculi (one large and two small) obtained from a horse which died with ruptured colon in the College infirmary.

Mr. C. M. W. Park showed two molar teeth from a horse thirty years of age, illustrating the extent of attrition which may take place whilst the teeth remain *in situ*.

Mr. Park then read a highly interesting essay on "Roaring and Whistling inHorses, its Causes and Treatment."

At the conclusion of the essay Mr. H. Thackeray opened a discussion on Mr. R. W. Carless' paper on "Parturition in the Mare with its immediate sequelæ," which was read at the last meeting.

A discussion was afterwards opened on Mr. Park's paper.

Votes of thanks to Messrs. Freer and Edwards for their kindness in forwarding morbid specimens, and to the Essayist and Chairman terminated the proceedings.

C. RADWAY, (Assist. Sec.)

Erratum.—The name of the drug mentioned in last report is "*arecaline*," not "arecoline."

EXTRACTS AND NOTES.

PRINCIPAL WILLIAMS AND ANOTHER v. THE ROYAL COLLEGE OF VETERINARY SURGEONS.

In the Outer House of the Court of Session, Edinburgh, on Thursday, December 3rd, before Lord Kincairney.

The Lord Ordinary disposed of the action in which Principal Williams, and his son, William Owen Williams, proprietors of the New Veterinary College, Edinburgh, sued the Royal College of Veterinary Surgeons, Edinburgh, for declarator that the defenders were bound to admit to the examinations held by them in Scotland, in terms of the Veterinary Surgeons Act, 1881, all students, whether male or female, attending the New Veterinary College, Edinburgh, who comply with the regulations relative to these examinations; and that the defenders were not entitled or bound to exclude and such student from examination merely upon the ground that such student is of the female sex. Interdict against the exclusion of duty qualified students was asked, and there was also a conclusion for £50 in name of damages.

Lord Kincairney said that the important and interesting question sought to be raised in this case was whether female students were eligible to be admitted as members of the Royal College of Veterinary Surgeons. That College was incorporated by Royal Charter dated 8th May, 1844. It was, he understood, an examining not a teaching body, and its members were declared to consist, inter alia, of such persons as then held certificates of qualification granted by the Royal Veterinary College of London or the Veterinary College of Edinburgh, and such persons as were or might become students of either College or of such other Veterinary College as should be established for the purpose of education in veterinary surgery and should be authorised by Royal Sign Manual, and who should pass the examinations appointed by the Royal College. The New Veterinary College, Edinburgh, was such a College as was above mentioned. It was authorised by Prerogative Writ under the Sign Manual dated 8th November, 1873, and its students were therefore entitled, subject to certain regulations and qualifications, to offer themselves for examination to be admitted as members of the Royal Veterinary College. The pursuers said that one of these qualifications was not that the applicants were to be all men. The two pursuers, besides being, as sole partners of the firm of Williams & Son, proprietors of the Veterinary College, Edinburgh, were respectively Principal of, and a Professor in, that College, and each was, besides, a member of the Royal College. The occasion which had given rise to this action was that a lady who was a student of the New Veterinary College desired to enter for the examination of the Royal College, and was rejected on the ground of her sex, the Council of the Royal College having formed the opinion that the admission of a woman was contrary to usage and inconsistent with the Charter of the Veterinary Surgeons Act, 1881. It was admitted that this lady had fulfilled all preliminary requirements, and that the sole ground for her rejection as an applicant for examination was her sex. The pursuers said that on her rejection she discontinued her studies in their College, and the £50 was claimed for loss of fees which she would otherwise have paid. This lady, however, was not a pursuer of this action. The defenders had pleaded (1) no jurisdiction, (2) "forum non conveniens," (3) no title. His Lordship saw no ground for the second plea, and thought that, as a question of convenience, it was of no consequence whatever whether this question was tried in this or the English Courts. The Veterinary Act and the defenders' Charter concerned both parts of the kingdom alike. But the plea denying jurisdiction altogether was much more serious. Although the record was meagre, his Lordship had come to think that he had materials for deciding that the domicile of the Royal College was England. He reached that conclusion from a study of the Charter, the Statute, and the Rules and Regulations, and not from the defenders' record, which told little or nothing. He gathered from the Act, Charter, and Rules, that the affairs of the College were managed by a Council with a President and Vice-president; that the Council met in the Council Room in London for the transaction of business—he supposed in Red Lion Square; that there was a secretary who attended there, and a minute-book kept there; that the corporate seal was kept there, and the register, and he assumed that the registrar attended there also. His Lordship did not understand why these things were not said in the statement of facts, and he was in some doubt whether he did not go too far in assuming them. But he thought he might hold that the headquarters of this College were in London. It might be that the defenders took the English domicile for granted, and that the pursuers hardly disputed it. He understood the argument for the pursuers rather to be that the College had a domicile in Scotland also, and might be sued in either forum; and, if so, it was not clear why they had resort to a debateable forum, and not to one which was not debateable. He understood the pursuers to maintain the Scottish domicile on several grounds—(first), because the Royal College seemed to have been at first an amalgamation of two Colleges—the Royal Veterinary College of London and the Royal Veterinary College in Edinburgh; (second) because, as was said, more students came up for examination in Scotland than in England; and (third) because, under their Charter and Statute, they were bound to hold examinations in Scotland, and because they had a secretary resident in Scotland whose duty it was to attend to these examinations. The defenders said that this secretary had no office, but performed the business of the College in his private dwelling-house, a circumstance which, in his Lordship's opinion, was not material. It might have been important to know how far this Scottish secretary was controlled from the London office; but this information was withheld. These reasons seemed not without weight, but his Lordship thought they were insufficient. The fact that many Scotsmen were members of this College could not affect the question of domicile. Although it was true that the Royal College had a hybrid origin, yet its Charter distinctly localised, it and its Council and Register and Council chambers in London. The annual meetings of the College might be held in Edinburgh, but not the meetings of the Council. On the whole, his Lordship thought he was entitled, in respect of the words contained in the Statute, Charter, and Rules, to conclude that the Royal College of Veterinary Surgeons was domiciled in England and not in Scotland. But the pursuers, in order to meet that view, had used arrestments, jurisdictionis fundandæ causa, and the question was whether such arrestments founded jurisdiction in a case where the conclusions were declaratory or executive of the declaratory conclusions, and where, substanially, the whole question was as to the constitution of the Corporation and the import of the charter. This was, no doubt, a question open to debate. But it might be remarked that the pursuers' endeavour to avoid the defenders' forum and bring the defenders to their forum did not seem supported by any strong considerations of equity. He had not been referred to any precedent or authority where jurisdiction had been held to be founded by arrestment to try such a wide and general action of declarator as in this case, and he must hold it to be ineffectual. But the pursuers maintained that in any case

the jurisdiction of the Court must be sustained to try the claim for £50 and damages. As his Lordship could not reach this claim without deciding the main question, it seemed to him impossible to sustain this contention. Lastly, the pursuers contended that jurisdiction should be sustained because the action wss founded on a sort of quasi-delict committed in Scotland—viz., the refusal in Scotland to admit the lady in question to examination. But this was really not an action founded on the supposed delict at all. It was truly a declaiator as to the import of the Statute or Charter. No authority was quoted where such a ground of jurisdiction was upheld, unless where there was personal citation. There could not be personal citation here, unless on the assumption that there was a Soottish domicile. For these reasons his Lordship sustained the plea of no jurisdiction, with some little regret, because, when the action had been brought, it might have been decided here as well as in London. At the eame time, he confessed he did not see the necessity or exdediency of bringing the case in the Scottish Court. As he had, in his opinion, no jurisdiction, it would not be fitting that he should express any opinion about the pursuers' title, still less about the interestiug question on the merits. He accordingly sustained the defenders' plea of no jurisdictien, and dismissed the action, with expenses.

Counsel for the Pursuers—Mr. W. Campbell and Mr. Daniell. Agent—Thomas M. Horsburgh, S.S.C.

Counsel for the Defenders—Mr. Shaw, Q.C.. and Mr. Abel. Agents—Wishart & Sanderson, W.S.

ARMY VETERINARY DEPARTMENT.—R. C. Moore, gent. to be Vet.-Lieut. in succession to Vet. Maj. S. M. Wilson, retired.

OBITUARY.

RICHARD DEWING SPINKS, M.R.C.V.S., Brighton.
Graduated, Lond., Dec., 1881.

A terrible fatal accident occurred at Hove on Thursday afternoon, Dec. 2nd., at about 25 minutes past four, the unfortunate victim being Mr. Richard D. Spinks, the well-known veterinary surgeon, of Jubilee Street, Brighton. It appears that he was riding along Grand Avenue on horseback when, from some unexplained reason, the animal started, and threw Mr. Spinks to the ground with frightful violence, his head coming in contact with the road. P.C. Izaac Balk, who was on duty in the vicinity, was soon upon the scene, and immediately sent for Dr. Richardson, of 2 Tisbury Road, Hove. The medical gentleman, on arriving on the spot, and having made an examination of the injured gentleman, ordered his removal to the Hove Hospital, a passing cab being requisitioned for the purpose. On being admitted to the institution Mr. Spinks was seen by Mr. H. Scott Turner, the house surgeon, who pronounced life to be extinct, death being due to fracture of the skull.

Mr. R. D. Spinks, who was 56 years of age, had carried on his profession in Jubilee Street for 26 years, coming from Norfolk in 1871. He was recognised as a specialist in the canine branch of his profession. For many years he was acting surgeon to the local branch of the R.S.P.C.A. His loss will be deeply regretted by the members of the "A" troop of the Middlesex Yeomanry, to which he acted as assistant veterinary surgeon, and which he was chiefly instrumental in forming, and it was through his efforts that the headquarters of the troop were established in Brighton. Deceased leaves six children to mourn him, of whom the eldest son will carry on the business for the present.—*Brighton Gazette.*

The funeral took place at the Extra-Mural Cemetery, Brighton, on the 4th inst.

Mr. G. E. Hillman (Coroner for East Sussex), held an inquiry at the Hove Hospital.

The jury returned a verdict of "accidental death," at the same time expressing their sympathy with the family of the deceased.

JOHN E. ROW, M.R.C.V.S., Burton-on-Trent.
Graduated, Lond., May, 1890.

The death occurred suddenly on Wednesday morning December 8th, of Mr. John Row, M.R.C.V.S., assistant for the past five or six years to Mr. Gaved. Deceased, who was about 27 years of age, amongst other work had the veterinary charge of Messrs. Bass and Co's. horses, and he attended to his duties on Tuesday as usual. At night he was present at a science class in preparation for an examination he had to undergo at Christmas, and later he again called at Bass's Middle Brewery, remaining until about one o'clock this morning. He returned to Mr. Gaved's house in Horninglow Street, where he resided, and was at once seized with a fit. Dr. Rugg was sent for, but Mr. Row passed away quietly at seven o'clock, this morning. Deceased, who was unmarried, was at one time officially connected with the Burton Liberal Unionist Association, the Wanderers Football Club, and the Trent Rowing Club.—*Burton Evening Gazettee.*

A correspondent writes: "John Row was a very nice fellow at College, very popular with his fellow students, and a FitzWygram Prize winner."

THOMAS TILSLEY, M.R.C.V.S., Welshpool.
Graduated, Lond., April, 1864.

It is with regret we have to announce the death of Mr. Thomas Tilsley, M.R.C.V.S., of Welshpool, aged 64 years. He studied at the London Veterinary College, and received his diploma in 1864. He commenced practice in Berriew, and afterwards removed to Welshpool, where he remained till his decease. By his ability as a practitioner and his genial manner he won a large number of friends, and was well known to all the leading agriculturists of the district.

We regret to announce [the death of M. Charles Cornevin, the eminent professor of hygiene and zootechny at the Lyons Veterinary School. By his demise, which occurred from typhoid fever on November 24th, the veterinary profession lose an ornament who acquired, by his constant work, a distinguished place in the agricultural and scientific world. He has left several works behind, tbe chief of which are his *Traité de l'Age des Animaux Domestiques*, *Traité de Zootechnie Générale*, and *Traité de Zootechnie Spéciale.*

CORRESPONDENCE.

COMPENSATION FOR GLANDERS.

Sir,

One of the points upon which difference of opinion was expressed in the very interesting discussion on glanders published last week was that of compensation. Professor McFadyean and Mr. Dollar were opposed to it, whilst Mr. Hunting was in favour of it.

Mr. Dollar is reported to have said that without compensation glanders could be stamped out with the powers now possessed by local authorities. Prof. McFadyean

argued that compensation was not only unnecessary but harmful, because owners would take no trouble until their diseased horses showed clinical signs, if compensation worth having were paid. Mr. Hunting contended that payment of compensation would induce owners to report the disease and not to hide it, especially now that the use of mallein rendered it possible to diagnose cases without clinical symptoms

I venture to think there is a middle course, viz., to pay a really liberal compensation for all cases detected by mallein, and nothing for those which are visibly diseased. I fail to see why an incurably diseased animal such as a clearly glandered horse should be paid for any more than a rabid dog. Both are useless and dangerous; owners should be glad to get rid of them, and ratepayers should not be asked to contribute to their losses.—Yours truly,

"A. B. C."

"VETERINARY CLASS BOOKS."

Sir,

Considerable difficulty exists among veterinary students in the different colleges as to "what books should they read on the different subjects? This applies more to those under the four years' course who have the additional subjects to learn, *e.g.*, stable management and hygiene. There is not a book on stable management adapted for the use of class "B" students, nor on zoology for class "A" students; and consequently a considerable number of students are rejected every year in this subject alone. Captain Smith's book on hygiene is the one generally used, and answers the purpose very well.

Is there no member in the profession that would undertake to write books on these subjects that would contain all that a student requires to know in order to satisfy the examiners? I am sure he would have the encouragement of all veterinary students of the several colleges.—Yours, etc.

"OBSERVER."

THE TEACHING OF ELEMENTARY VETERINARY SURGERY.

Dear Sir,

I am very pleased that my letter which was published in the issue of the 13th ult., of your valuable journal, has called forth so much sharp criticism from the young men who will no doubt soon become members and ornaments of the profession. It shows to me that they take an active interest in their future calling. Yet I am afraid, if I may judge by their response, that they misunderstood my meaning which was only intended as a stimulus, in fact, "to waken up the laggards,' as you say in your editorial of the 20th ult. And as I did not wish to be thought personal in the matter, I did not allude to any particular student, teacher, or school.

From the replies obtained, and from what I have observed, I have still to be convinced that everything is done so thoroughly as they imagine it to be. If the students believe themselves to be of a superior calibre, more intelligent and better taught *relatively* than their predecessors—men who have made the profession what it is—then I say: To whom much is given much shall be required. Practitioners and the public do not judge men by what they are taught at college or by what their teachers know, but by what they (practitioners, etc.) see them (students and young graduates) do in practice. I well know that the professors of the four respective colleges are able men, and that the majority of students are intelligent and crave for knowledge, but I have not been satisfied that the students are compelled to carry out their elementary surgical work in a strictly surgical manner.

The first great principle of modern surgery, which is no doubt taught by all teachers of the subject, is surgical cleanliness—asepsis. One gentleman calls me to task about being ignorant; that I did not read all the current medical literature; and, that I did not know that it was impossible to carry out asepsis in surgical operations performed upon the domesticated animals. All I know is what I have practised, and what others do, and not what I have imagined and probably been taught. Asepsis *is* possible, and is carried out not only by veterinary surgeons in this, but also, or perhaps first, in other countries. It is also carried out by medical men in this country when they operate on dogs, monkeys, etc. Vinsot carries out the operation for the removal of blemishes of the horse's knees under asepsis; and Cadiot one of the foremost veterinary surgical pathologists and surgeons of Europe, perhaps of the world, performs vaginal ovarectomy upon the mare and cow after the instruments, etc., have been sterilized and the vagina, etc., have been irrigated with sterilized saline water. I could mention many other reliable authorities but the above are sufficient for my purpose. Even if antiseptics are used they should only be auxiliaries. Cleanliness first and antiseptics after should be every veterinary surgeon's aphorism. The use of antiseptics without cleanliness first would be as if a man put on clean clothes without first washing himself, or, disinfecting a place without first removing the filth and washing down the walls, floor, etc. There is just as much argument in the favour of these two last similes as there would be in the use of antiseptics without surgically clean instruments, a clean field of operation, etc. It is a good thing that some of our patients are so resistent to septic germs, otherwise I am afraid the way surgery upon them is carried out would claim many victims. But when we come to operate on the horse and sheep it is a different thing, and I maintain that in many cases where death follows from sepsis, and no aseptic precautions have been taken before, during, and after an operation, the operator could, if his client only knew the law, be held responsible to the owner for the loss of his animal. And you, sir, the learned editor of this journal, remark that it is impossible to carry out operations well only under certain circumstances, as appliances are not always to hand. To this I will answer by saying that a saucepan and an oven can be found in most houses inhabited by owners, etc., of animals. There is no reason why instruments cannot be boiled for a few minutes in soda or borax and water, and why the dressings cannot be baked, and why the field of operation cannot be washed and shaved and then rinsed with sterilised saline water. To this you can add antiseptics if you like.

In reply to one gentleman I beg to remark that had I signed my name to my letter I should have been laying myself open to the accusation that I was advertising myself; also I will call his attention to the fact that I am not so "ignorant" as to be aware that to give *proofs* of my assertion in a public journal would be libellous. Finally, being beside my purpose I can afford to dispense with personalities.

"PROGRESSIONIST."

CLEANING HORSES BY MACHINERY.

Will any Veterinaay Surgeon who has had experience of cleaning horses by machinery kindly favour me with his experience thereon and where such can be seen, and oblige.

H. W. CATON,

413 Mile End Road, London, E.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Prof. Hobday, Messrs. A. Maller, J. McGavin, W. McPherson, J. A. Todd, G. Mayall, Joseph Collinson, J. E. Miller, C. W. Krohne, Macadam's Malt Co., "Observer," "A.B.C." *Brighton Gazette*, *The Crewe Chronicle*, *The Evening Argus* (Brighton), *Sussex Daily News*.